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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,453	01/27/2004	Harold Max Good	P03826	3186
28548	7590	05/12/2005	EXAMINER	
STONEMAN LAW OFFICES, LTD			WALBERG, TERESA J	
3113 NORTH 3RD STREET			ART UNIT	
PHOENIX, AZ 85012			PAPER NUMBER	

3753

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,453

Applicant(s)

GOOD, HAROLD MAX

Examiner

Teresa J. Walberg

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 9, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lesniak (4,513,811) in view of Frei (4,117,884).

Lesniak discloses a heat exchanger (see abstract) having the claimed structure including a heat transferor (Fig. 1) structured to convectively transfer heat, an array (col. 1, lines 46-50) of thermally conductive heat transfer conduits (12) having a fluid-dynamic shape, and top and base support plates (col. 1, lines 49-52) to support the ends of the heat transferor. Lesniak teaches at col. 1, lines 53-54, that the tubes can be square. Lesniak does not disclose the heat exchanger being used in combination with a dryer to recover heat from a stream of exhaust air. Frei teaches the use of a heat exchanger system with a dryer to transfer heat from the dryer exhaust to the fresh air stream entering the dryer. See Figs. 4 and 5. It would have been obvious in view of Frei to use the heat exchanger structure of Lesniak in combination with a dryer in order to recover heat from the dryer exhaust and thus reduce energy usage.

It is noted that the clause starting with "relating to" in the preamble of claim 1 is capable of interpretation as a statement of intended use or, alternatively, as a statement that the heat exchanger is being claimed in combination with a dryer.

Since clause (e) of claim 1 requires a structure adapted to maintain a structural relationship with the dryer, claim 1 has been interpreted by the examiner as being a combination claims that required a heat exchanger in combination with a dryer. If this is contrary to applicant's intent, then clarification is required.

3. Claims 3-6 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lesniak (4,513,811) in view of Frei (4,117,884) as applied to claims 1, 2, 9, and 20 above, and further in view of Skinner (1,618,485).

Lesniak in view of Frei discloses a heat exchanger having the claimed structure with the exception of the tubes being arranged in staggered alternating rows and having a corner facing the air flow. Skinner (see Fig. 1) teaches the use of a heat exchanger system with the tubes (5, 6) being arranged in staggered alternating rows and having a corner facing the air flow (see Fig 1). It would have been obvious in view of Skinner to use tubes arranged in staggered alternating rows and having a corner facing the air flow in the heat exchanger of Lesniak in view of Frei to increase the rate of heat transfer.

Claim 14 is interpreted as being a product by process claim, and thus the claim limitations are met if the structure could have been made using the recited process steps, even if the actual process steps used were different. Since the step of pre-configuring the heat exchanger based on customer requirements would not appear to result in a structural difference in the device, the claims are deemed to be met by Lesniak in view of Frei and Skinner as recited above.

4. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lesniak (4,513,811) in view of Frei (4,117,884) as applied to claims 1, 2, 9, and 20 above, and further in view of Doty (Re.33,528).

Lesniak in view of Frei discloses a heat exchanger having the claimed structure with the exception of the thickness of the tubes and the tubes being aluminum. Doty teaches the use of a heat exchanger system with the tubes being aluminum (col. 6, line 58) and having a thickness of about 0.018 inches (col. 6, line 60, teaches 0.25 to 3 mm which equals 0.00984 to 0.118 inches. It would have been obvious in view of Doty to use aluminum tubes in the heat exchanger of Lesniak in view of Frei to reduce the weight of the device and to use the claimed tube thickness in order to have sufficient tube strength and good heat transfer.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schell and Onions et al teach the use of square heat exchanger tubes. Paull, Castonguay, and Pipher et al are cited to show heat exchanger recovering heat from exhaust streams.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 9:00 - 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on 571-272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Teresa J. Walberg
Primary Examiner
Art Unit 3753

tjw